

Position Type: Postdoctoral Position at the NIH

Position Title: Research in multidimensional diffusion MRI

Position description:

The [Multiscale Imaging and Integrative Biophysics \(MiiB\) Unit](#) within the National Institute on Aging's (NIA's) [Laboratory of Behavioral Neuroscience](#) is offering a postdoctoral position to study Alzheimer's Disease (AD) and related Dementias. This is a full-time primary research fellowship for postdoctoral scholars, which will be mentored by [Dr. Dan Benjamini](#). The MiiB Unit combines diffusion-relaxation multidimensional MRI with complementary histological and omics methods to investigate cellular processes that relate to function, microstructure, and chemical composition in normative aging, mild cognitive impairment, and dementia.

- *Investigate effects of aging and cognitive impairment on brain microstructure and water exchange using multidimensional diffusion-relaxation correlation MRI*
- *Leverage longitudinal study of human aging using multidimensional MRI*
- *Combine and correlate MRI with proteomics, spatial transcriptomics, blood biomarkers, and complementary modalities to study disease progression*

Environment: MiiB is part of the larger MRI research community at NIA, which has active programs in clinical and preclinical research. Among the available resources are preclinical 7T and 9.4T Bruker animal scanners, preclinical 14T Bruker vertical scanner, clinical 3T Philips MR7700 and 7T Siemens Terra.X scanners. Additionally, two major ongoing research initiatives at the NIA, the Baltimore Longitudinal Study on Aging (BLSA) and the Genetic and Epigenetic Signatures of Translational Aging Laboratory Testing (GESTALT), present unique opportunities for multimodal integrated research.

Qualifications:

- Ph.D. in a relevant engineering, physical science, computer science or mathematics discipline.
- Background in signal or image processing.
- Solid programming skills: MATLAB/Python/C/C++.
- Experience with the acquisition and/or analysis of MRI data.

Compensation: Salary is consistent with NIH guidelines and benefits include health, dental and vision insurances, paid time-off, and conference time. The duration of postdoctoral fellowship appointments can be for up to five years. International applicants are welcomed.

How to Apply: Interested applicants should contact Dr. Dan Benjamini (dan.benjamini@nih.gov) and submit: (1) a curriculum vitae (CV), (2) a bibliography, (3) a cover letter, and (4) a list of at least three references.

Employer Name: National Institute on Aging (NIA)

Position Location: Biomedical Research Center, Baltimore, Maryland (hybrid – possible)

Application Deadline Date: March 1, 2025 or until filled.

DHHS and NIH are Equal Opportunity Employers. The NIH is dedicated to building a diverse community in its training and employment programs and encourages the application and nomination of qualified women, minorities, and individuals with disabilities.

